

REMARKS

In response to the Office Action mailed July 13, 2006, Applicants respectfully request reconsideration. To further the prosecution of this application, each of the rejections in the Office Action has been carefully considered and is addressed below. The application, as presented, is believed to be in condition for allowance.

Objections to the Specification

The Office Action objects to the specification for purportedly failing to comply with 37 C.F.R. 175(d)(1). Specifically, the Office Action asserts that the specification lacks support for the terms “a first portion” and “second portion” in claims 8 and claim 9.

Applicants respectfully disagree. 37 C.F.R. 1.75(d)(1) states that, “[t]he claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.” The specification of the present application complies with this rule.

Support for the claim terms “a first portion” and “a second portion” can be found in Applicants’ specification, page 25, line 30 – page 26, line 4, which describes an example of an embodiment in which the content address of a unit of data (e.g., a CDF) is generated based on only a first portion of the unit of data and not on a second portion of the unit of data. As explained in the specification, a retention period can be stored within a portion of a CDF that is not processed by the hash function that generates the content address for the CDF. The specification explains that this may be advantageous because changes to the retention period do not result in a change of the content address for the CDF. Thus, the terms “first portion” and “second portion” are clearly supported in the specification. Accordingly, it is respectfully requested that the objection to the specification be withdrawn.

Objection to the Drawings

The Office Action objects to Figure 6 because element 605 is crossed out with an 'X'. The Office Action asserts that the purpose of the this 'X' is unclear. Applicants respectfully disagree.

Figure 6 shows an example of one embodiment of the invention, in which a retention period for a unit of data is modified by replacing a CDF that references the unit of data with a new CDF that references the unit of data and specifies a different retention period from the original CDF. This example is described in Applicants' specification at page 22, line 30 - page 23, line 26.

In the example of Figure 6, blob 601 is originally referenced by CDF 605, which specifies an indefinite retention period for blob 601. Subsequently, CDF 603 is created, which references blob 601 and specifies a retention period of two years for blob 601. CDF 605 is then deleted. Thus, the purpose of the 'X' through CDF 605 is to show that CDF 605 is replaced with CDF 603 and deleted.

Figure 6 is believed to comply with all applicable rules, and it is respectfully requested that the objection of Figure 6 be withdrawn. If the Examiner would prefer to see the deletion of CDF 605 represented differently, Applicants would be happy to discuss.

Claim Rejections

The Office Action rejects claims 1-10 and 20-29 under 35 U.S.C. §102(e) as purportedly being unpatentable over Bazoon (Pub. No. 2004/0249871) and rejects claims 11-19 and 30-37 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in combination with various other references. The Office Action does not specify the basis for the rejection of claims 38-80, but asserts that these claims "can be rejected on a similar basis to claims 1-37." *See Office Action, page 10.*

Overview of Illustrative Embodiments of the Invention

Applicants have appreciated that it is often important for a business or institution to prevent records from being deleted or modified until a certain period of time has elapsed (Applicants' specification, page 1, lines 15-17). Thus, in one embodiment, a retention period may be assigned to

a unit of data stored on a storage system, which specifies a period of time during which the storage system will not permit deletion of the unit of data (Applicants' specification, page 15, lines 1-12). Thus, if a request to delete the unit of data is received before expiration of the retention period, the request is denied and the unit of data is not deleted.

Applicants also have appreciated that in some situations, it may be desired to reduce the length of a previously defined retention period before that retention period expires (Applicants' specification, page 20, lines 26-29). Such situations may arise, for example, when an event occurs that may obviate the need to retain the data for the entire length of a previously defined retention period. For example, the death of a medical patient may obviate the need to retain the patient's medical records for the entire retention period (Applicants' specification, page 20, line 29 to page 21, line 1).

Figure 5 shows conceptually one embodiment of the invention in which the retention period a unit of data may be reduced. In Figure 5, source 501 sends a request 503 to storage system 505. The request 503 seeks to reduce retention period for a CDF 506 stored in a storage system 505 (Applicants; specification, page 21, lines 11-14). The reduction of the retention period permits the unit of data to be deleted prior to expiration of the initially specified retention period for the unit of data.

Discussion of Bazoon

Bazoon is directed to a system and method for automatically removing documents from a knowledge repository (Abstract). Bazoon discloses that a storage period may be assigned to documents in a knowledge repository. In the system of Bazoon, a storage period is generally defined as a value or value range which tracks the amount of time remaining for the document to stay in a database (§20). That is, a storage period defines a maximum period of time that a document is allowed to exist in the knowledge repository (§20). Thus, when the storage period of a document has expired, the document is automatically removed from the knowledge repository (§24).

Contrasting Bazoon With Embodiments Of The Invention

The storage period of Bazoon is fundamentally different from the retention period employed in embodiments of the present application. In the system of Bazoon, storage periods require deletion of documents. That is, a storage period for a document specifies a time that the document is to be automatically deleted. A storage period does not prevent deletion of a document prior to its expiration, but rather causes deletion of the document at its expiration.

By contrast, retention periods in the present application do not require deletion of content, but rather prevent deletion of content during the retention period. That is, unlike Bazoon's storage period, a retention period prevents a document from being deleted and does not cause a document to be deleted at its expiration.

A simple example makes the differences between the system of Bazoon and embodiments of the present invention clear. Assume a user issues a request to delete a unit of data before the retention period has expired. In Bazoon, the content would be deleted, whereas in the system in accordance with one embodiment of the present invention, the deletion request would be denied and the content retained.

It should be appreciated that the foregoing discussion of embodiments of the invention is provided merely to assist the Examiner in appreciating various aspects of the present invention. However, not all of the description provided above necessarily applies to each of the independent claims pending in the application. Therefore, the Examiner is requested to not rely upon the foregoing summary in interpreting any of the claims or in determining whether they patentably distinguish over the prior art of record, but rather is requested to rely only upon the language of the claims themselves and the arguments specifically related thereto provided below.

Claims 1-19

Claim 1, as amended, is directed to a method of processing data in a computer system comprising at least one host and at least one content addressable storage (CAS) system, wherein the at least one host identifies units of data on the at least one CAS system using content addresses each generated based, at least in part, on at least a portion of the content of the corresponding units of data, the at least one CAS system storing at least one unit of data having a previously-defined

retention period during which the at least one unit of data cannot be deleted from the at least one CAS system. The method comprises acts of: (A) receiving, at the at least one CAS system, a request from the at least one host to reduce a length of the retention period for the at least one unit of data; and (B) reducing the length of the retention period for the at least one unit of data in response to the request.

Bazoon does not disclose or suggest the use of retention periods during which the units of data cannot be deleted from the at least one storage system. Rather, as discussed above, the system of Bazoon uses storage periods which specify a maximum time for storing a document and not a time during which documents cannot be deleted.

As Bazoon does not disclose the use of a retention period that defines a period during which the at least one unit of data cannot be deleted from the storage system, Bazoon does not disclose receiving, at the at least one storage system, a request from the at least one host to reduce a length of the retention period for the at least one unit of data and reducing the length of the retention period for the at least one unit of data in response to the request, as recited in claim 1.

Thus, claim 1 patentably distinguishes over Bazoon. Accordingly, it is respectfully requested that the rejection of claim 1 be withdrawn. Claims 2-19 depend from claim 1 and are patentable for at least the same reasons. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn.

Claims 20-38

Claim 20, as amended, is directed to at least one computer readable medium encoded with instructions that, when executed on a computer system, perform a method of processing data, wherein the computer system comprises at least one host and at least one content addressable storage (CAS) system, wherein the at least one host identifies units of data on the at least one CAS system using content addresses each generated based, at least in part, on at least a portion of the content of the corresponding units of data, the at least one CAS system storing at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted from the at least one CAS system. The method comprises acts of: (A) receiving, at the at least one CAS system, a request from the at least one host to reduce a length of the retention period

for the at least one unit of data; and (B) reducing the length of the retention period for the at least one unit of data in response to the request.

As should be clear from the discussion above, Bazoon fails to disclose or suggest (A) receiving, at the at least one storage system, a request from the at least one host to reduce a length of the retention period for the at least one unit of data; and (B) reducing the length of the retention period for the at least one unit of data in response to the request.

Thus, claim 20 patentably distinguishes over Bazoon. Accordingly, it is respectfully requested that the rejection of claim 20 be withdrawn.

Claims 21-38 depend from claim 20 and are patentable for at least the same reasons. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn.

Claims 39-80

As discussed above, the Office Action does not specify the basis of rejection of claims 39-80. However, independent claims 39, 58, 65, and 72 distinguish over the cited references for reasons similar to those discussed above. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn.

Claims 40-57 depend from claim 39, claims 59-64 depend from claim 58, claims 66-71 depend from claim 65, and claims 73-80 depend from claim 72. Each of these dependent claims patentably distinguishes over the cited references for at least the reasons of its respective independent claim. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn.

Activity In Related Applications

In an Information Disclosure Statement filed on May 1, 2006, Applicants cited Hochberg (Pub. No. 2005/005518) and the Examiner initialed the reference indicating that it has been considered. Hochberg has been relied on in rejecting claims in co-pending application serial nos. 10/762,036 and 10/761,826, which share a common specification with the present application. The Examiner is invited to review the Office Actions in these co-pending applications and Applicants' arguments in response thereto.

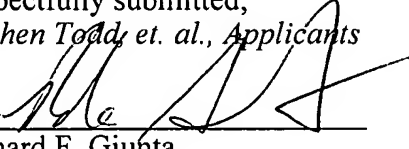
CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: October ¹³, 2006

Respectfully submitted,
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